Vatsa Patel

Software Systems Engineer | Masters in CS student

San Francisco Bay Area
vatsa.patel@sjsu.edu
+1 408 471 7539
/VatsaPatel

Experience

3D RoomSpace | Software Engineering Intern Los Angeles, CA • May 2020 - Aug 2020
- Rearchitected and migrated independent services to a scalable Kubernetes environment.
- Developed the core services for the rental platform to automate leasing and easily secure medium-term rentals.

Tech Stack: GCP Cloud run, Google Kubernetes Engine | Node, GraphQL | React Native, React, Gatsby

Freelance Contractor San Francisco, CA • May 2020 - Present
- PodSource, SF: Helped move to a scalable serverless architecture reducing monthly bills by 72%.
- Built a tool to automatically tag and push docker images to multiple Container Registries with multiple login management integrating with their internal system.
- Wetherbees Unofficial: Migrated their firebase SDK based backend to DynamoDB and developed GraphQL endpoints.

A D Patel Institute of Technology | Software Engineer

Learning Management Platform Aug 2017 - Sept 2018
- Engineered highly-available backend services that are architected to scale even on low-end hardware.
- Deployed an in-house private Cloud cluster using OpenStack that can scale-up or scale-down based on load also providing IaaS for other student projects.
- Created a custom network authentication service integrating with internal IAM and auto-assigning bandwidth and QoS based on access level.

Tech Stack: React, React Native, Electron | NodeJS, Golang | MemSQL, HBase, Aerospike.

ADIT Alumni Hub Aug 2016 - Mar 2018
- Designed & Developed a social platform from scratch to allow Alumni to reconnect with each other, discover other alumni in same region and profession, share jobs & events. Attained 6,400 users within first 3 months.

Tech Stack: React, JQuery | PHP, NodeJS | MySQL, Memcached

Smarq Technologies Nov 2015 - May 2016
- Ideated a startup at Qualcomm incubator which was selected in the top-10 startup ideas out of thousands of applicants.
- Smarq: tightly-knit ecosystem of smart sensors capable of automation sequences based on local location of user.

Purva Couture | Software Developer Aug 2015 - Dec 2015
- Single-handedly developed a Business Operations system that managed from Sales to Production to Deliveries handling 700+ clients & revenue of $1M+.

Projects

SlackHR Feb 2020 - May 2020
- Developed a Slack plugin application that helps combat abusive conduct at a workplace backed by a Multi-Label classifier using Neural Network. **Currently used at IBM research team's Slack.**

Reverse proxy to increase downlink bandwidth Aug 2019 - Sep 2019
- Developing a reverse proxy that substantially minimizes the effect of Bandwidth Delay Product on TCP Throughput by buffering the file on multiple connections.
- Preliminarily achieved 8x improvement in streaming on intercontinental bandwidth with BBR congestion control.

Federated Learning - Privacy Enhanced Collaborative Machine Learning Jan 2019 - Aug 2019
- Optimized Federated Averaging Algorithm optimized for Large-Scale LSTM-CNN when the input consists of large number of small-sized updates in Homomorphic Encryption.
- Submitted and got invited to present my research paper in IEEE.

Skills

Backend: NodeJS, PHP, Python, Java, C++   **Database:** SQL : MySQL, Postgres | NoSQL : MongoDB, Redis, DynamoDB

DevOps: AWS, GCP, Docker, Kubernetes, CI/CD, Chef, Kafka, Spark   **Frontend:** React, React-Native, Android

Education

San José State University Jan 2020 - Dec 2021 Expected
Candidate for Masters in Computer Science
Dual Specialization: Networking Software & Enterprise Software Technologies

Gujarat Technological University Jul 2015 - Jul 2019
Bachelor of Engineering in Computer Science